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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/018,220 | 04/26/2002 | Nevio Vidovic | 000515-281 | 3449 |
| 21839 | 7590 | 06/14/2004 | EXAMINER | |
| BURNS DOANE SWECKER & MATHIS L L P POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404 | | | NGUYEN, TU T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2877 | |

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/018,220 | VIDOVIC ET AL. |
| | Examiner | Art Unit |
| | Tu T. Nguyen | 2877 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 22 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8, 12 and 13 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8, 12 and 13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8,12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sundburg et al (5,747,793).

With respect to claims 1,3, Sundburg discloses a method of compensating for bending of an optical fiber. The method comprises: a sensor element (fig 1b) connected to a measuring 1 (fig1a) and control unit via optical fiber 199 (fig 1 a), transmitting a reference light 108 (fig 1a) and a measured light 107 (fig 1a) which having different wavelengths (columns 5-6), measuring 111 (fig 1a) the reference light without being influenced by the sensor $\lambda(R)$ (fig 1b) and measuring a measured light after being influence by the sensor $\lambda(S)$ (fig 1b).

Sundburg discloses compensating for bending of the optical fiber (columns 5-6). Sundburg does not disclose compensating for bending of the optical fiber by reference to correction data based upon pre-stored data. However, it would have been obvious to modify Sundburg's system to compensate for bending of the optical fiber by reference to a correction data based upon pre-stored data to speed up the process and make the system more efficient.

With respect to claims 2,6, Sundburg discloses a rotator 502 (fig 5b) for varying the amount of light reaches to the mirror 512 (fig 5b) (column 8, lines 10-25). By varying the amount of light reaches to the mirror 512, it would have been obvious that the measuring signal would cause optical interference.

With respect to claim 4, Sundburg discloses that the sensor can be modified for pressure measurement (column 8, lines 1-5).

With respect to claim 5, refer to discussion in claim 1 above. Further, Sundburg does not disclose using a second detector. However, it would have been oblivious to modify Sundburg's system with a plurality of detectors to detect different reflected lights to facilitate the measurement.

With respect to claims 7-8, it would have been obvious a design choice to modify Sundburg's cavity 502 (fig 5b) with different material for measuring different physical parameters.

With respect to claims 12-13, Sundburg discloses the claimed limitations (fig 6a).

Response to Arguments

Applicant argues the following:

- 1) Reflection of the reference signal is provided by the means of an interface or transition between the pressure sensor 8 and the optical fiber 4.
- 2) Sensor element which is constituted by a silicon-base component which defines a cavity, a membrane, etc.

In response to the first argument, the argued limitation has not been claimed in the independent claims 1, 5. The claims only say "a sensor element". It would have been obvious that the filter 110 (fig 1b) of Sundburg (5,747,793) could be considered as a part of the sensor element as claimed.

In response to the second argument, Applicant does not claim a silicon-base sensor which defined a cavity, a membrane, ect. as argued. In claims 1,5, Applicant only claims a "sensor element". Elements 414,413 of Sundburg could be considered as the claimed "sensor element".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu T. Nguyen
Primary Examiner
Art Unit 2877

06/12/2004